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Traffic and Circulation

The Traffic and Circulation Element is intended to provide guidance and specific actions to ensure the continued safe and efficient operation of San Ramon's circulation system. The Element is based on a fundamental philosophy that traffic conditions in the City can be managed through a comprehensive program of transportation planning, land use planning, and growth management strategies.

State Law recognizes that circulation and land use are closely related and requires that policies in this Element and the Land Use Element be tied together. Careful integration of the City's traffic and circulation policies with its land use policies will ensure that there is sufficient roadway capacity to accommodate traffic generated by planned future development. The City is committed to designing a system of regional routes, local roads, public transit, and bicycle and pedestrian pathways that will enhance the community and protect the environment.

San Ramon's Transportation Systems Management Program incorporates four strategies. First, transportation programs are based on circulation system planning and land use planning. Second, the City's traffic circulation planning efforts are integrated with those of adjoining cities and counties in a cooperative, regional planning effort. Third, state of the art traffic engineering is used to bring planned improvements to reality. Fourth, demand management strategies are employed to reduce dependence on single-occupant vehicles for

commute travel. Only through the development and implementation of all these strategies can the City's commitment to a balanced, efficient circulation system be achieved.

5.1 CIRCULATION AND LAND USE

The circulation network provides the linkage between different land uses and facilitates access to home, shopping, jobs and recreation. With an efficient transportation system, people in San Ramon can enjoy the advantages of living in a small community and at the same time have access to neighboring metropolitan areas. Figure 5-1 shows the circulation network.

While this network is planned to provide sufficient capacity to accommodate the growth envisioned in the General Plan, the City must plan not only for roadway capacity improvements, but for all available travel demand management methods to manage traffic flow in the City. New roadway construction and street widening projects are expensive, can be damaging to the environment, and tend to promote single-occupant auto travel. Alternatives to major roadway widenings are discussed throughout this Element. They include transportation system management, more efficient operation of existing roads, and improvements to the bus, bicycle and pedestrian circulation systems. More importantly, this Element, as well as the Land Use and Growth Management Elements, contain policies that allow development to occur only if it meets the City's infrastructure requirements and traffic level-of-service (LOS) standards as shown in Table 5.1-1.

Traffic level of service (LOS) is an objective measure of operating conditions on streets and at intersections. The term “Level of Service” refers to the traffic conditions which confront drivers when they are using the roadway system. The calculation of levels of service results in numerical ratios which help to describe the degree of traffic congestion, as well as the amount of roadway capacity.

Table 5.1: Level of Service Standards

Level of Service (LOS)	Volume/Capacity Ratios (V/C)	Description
A	< 0.60	Traffic is typically free flowing; very little delay.
B	0.61-0.70	Only slight delays; the majority of vehicles do not stop.
C	0.71-0.80	Acceptable delays; if an intersection is signalized, a few drivers may have to wait through one signal cycle.
D	0.81-0.90	Delays are substantial during short periods, but excessive backups do not occur.
E	0.91-1.0	Delays can exceed one or more signal cycles.
F	> 1.0	Excessive delays; back ups from other locations restrict or prevent movement.

As part of the development review process, developers are required to prepare traffic studies. If traffic from a proposed project results in unacceptable impacts to the City’s circulation system, the developer is required to include mitigation measures which will maintain acceptable levels of service.

San Ramon has adopted policies to ensure that acceptable levels of traffic service are maintained on City streets as development progresses. Peak-period traffic (or commute hour traffic) on arterial routes are evaluated by comparing

projected traffic volumes to roadway and intersection capacities. The ratio of traffic volume to traffic capacity (“volume/capacity” ratios) can be used to describe the quality of traffic flow on a roadway or through an intersection. Traffic operations are classified by Levels of Service (LOS) A through F.

GUIDING POLICY

- 5.1-G-1 Maintain acceptable levels of service and ensure that future development and the circulation system are in balance.

IMPLEMENTING POLICIES

- 5.1-I-1 Strive to maintain traffic LOS C or better as the standard at all intersections, with LOS D during a total of no more than three peak periods of the day (a.m., p.m., and noon peaks).

The Growth Management Element further discusses the specific conditions under which LOS D will be accepted.

- 5.1-I-2 Require traffic impact studies for all proposed new developments which are projected to generate 50 or more peak hour vehicle trips.
- 5.1-I-3 Identify and implement circulation improvements on the basis of traffic studies.
- 5.1-I-4 Implement uniform design standards for City arterials, collectors, and local streets.

- 5.1-I-5 Monitor key intersection levels of service on an annual basis and document the results.
- 5.1-I-6 Implement the following transportation programs: the Commute Alternative Program, the Traffic Engineering and Traffic Safety Program, the Residential Traffic Calming Program, and the Safe Routes to School Program.

The potential effects of traffic calming measures on emergency response are an important consideration in the development of any traffic calming program. Traffic calming should not significantly hinder emergency response or adversely affect the ability of emergency service providers to achieve their respective performance standards.

- 5.1-I-7 Implement a *School Traffic Calming Program* to address access and safety issues on streets adjacent to schools in San Ramon.

5.2 REGIONAL TRANSPORTATION PLANNING

Regional transportation planning coordination is a major focus of the City's transportation management philosophy. In 1988, Contra Costa County voters approved Measure C, the Contra Costa County Transportation Improvement and Growth Management Initiative. Measure C established countywide standards for traffic levels of service and circulation improvements, as well as a comprehensive growth management program that includes a requirement for cooperative multi-jurisdictional transportation planning. San Ramon has actively participated in the development of

subregional multi-jurisdictional planning efforts including the Southwest Area Transportation Committee (SWAT) and the Tri-Valley Transportation Council (TVTC). Many of the policies in Section 5.2 are also referenced in the Growth Management Element, which discusses Measure C requirements in detail.

GUIDING POLICY

- 5.2-G-1 Actively participate in local and regional transportation planning.

IMPLEMENTING POLICIES

- 5.2-I-1 Develop and implement action plans for routes of regional significance, in cooperation with the Southwest Area Transportation Committee (SWAT) and the Contra Costa Transportation Authority (CCTA). The City shall remain active in their participation with a local committee should SWAT disband as a result of the sunset of Measure C.
- 5.2-I-2 Develop and implement the Tri-Valley Transportation Plan through participation in the Tri-Valley Transportation Council (TVTC).
- 5.2-I-3 Participate in programs to mitigate regional traffic congestion.
- 5.2-I-4 Support goals and policies of the Contra Costa Congestion Management Plan (CMP).
- 5.2-I-5 Emphasize regional transportation demand management and trip reduction strategies as

alternatives to improvements to existing facilities and the construction of new facilities.

5.2-I-6 Identify the impacts of land use decisions on regional as well as local transportation facilities.

5.2-I-7 Support regional air quality objectives through effective management of the City's transportation system.

5.3 ARTERIAL ROADWAYS

The City's circulation system is based on a functional classification of arterial, collector, and local streets. The system of classifying roadways is intended to provide adequate through-travel capacity on major routes while limiting through-traffic in residential neighborhoods. The function of arterial roadways is to accommodate high traffic volumes and intra-city circulation. Drivers use these streets to travel to activity centers, freeways, and other arterials. These streets also serve adjacent residential land uses via arterial and collector connections.

GUIDING POLICY

5.3-G-1 Design arterial roadways to carry high-volume, higher-speed traffic, thereby minimizing through-traffic in residential areas of the City.

IMPLEMENTING POLICIES

5.3-I-1 Ensure that adequate north-south and east-west arterial capacity is provided to accommodate future travel demand.

5.3-I-2 Implement the City's five-year Capital Improvement Plan.

5.3-I-3 Construct the capacity improvements necessary to serve traffic growth generated by development under the General Plan.

- **Crow Canyon Road:** Widen to eight lanes from I-680 to Alcosta Boulevard. Widen to six lanes from Alcosta Boulevard to Danville Town limits. Preserve right-of-way for widening to four lanes from Bollinger Canyon Road to Alameda County line.
- **Dougherty Road:** Support construction to six lanes from Crow Canyon Road to Alameda County line.
- **Bollinger Canyon Road:** Widen to eight lanes from I-680 to Alcosta Boulevard. Construct to six lanes from Alcosta Boulevard to Dougherty Road (North). Construct to four lanes from Dougherty Road (North) to Dougherty Road (South).
- **Windemere Parkway:** Construct to four lanes from Bollinger Canyon Road to Camino Tassajara.
- **East Branch Road:** Construct to four lanes from Bollinger Canyon Road to Windemere Parkway.
- **San Ramon Valley Boulevard:** Complete construction to four lanes from Montevideo Drive to Alcosta Boulevard.
- **Camino Tassajara:** Support widening to four lanes from Danville Town limits to Windemere

Parkway. Support widening to six lanes from Windemere Parkway to Alameda County line.

- **Alcosta Boulevard Extension:** Extend Alcosta Boulevard north from Crow Canyon Road to Fostoria Parkway as a four-lane street. Widen and construct Fostoria Parkway as a four-lane roadway from Camino Ramon east to Alcosta Boulevard extension. (These streets are partially within the Danville Town limits, and these projects would require the support and participation of the Town of Danville.)

- 5.3-I-4 Maximize the carrying capacity of arterial roadways by controlling the number of intersections and driveways, prohibiting residential access, and requiring sufficient off-street parking to meet the needs of each project.
- 5.3-I-5 Require traffic impact mitigation fees on new residential and commercial development to ensure that transportation improvements are constructed before the increased traffic causes conditions to deteriorate.
- 5.3-I-6 Make optimal use of federal, state, and other funding sources to complete circulation system improvements.
- 5.3-I-7 Minimize congestion on arterials by fully implementing the policies in the Transportation Systems Management and Transit section of the Circulation Element.
- 5.3-I-8 Encourage regional freight movement on freeways and other appropriate routes; evaluate and

implement vehicle weight limits as appropriate on arterial, collector and local roadways to mitigate truck traffic impacts in the community.

5.4 COLLECTOR AND LOCAL ROADWAYS

Collector roadways are used to travel within and between neighborhoods. These roadways collect traffic from local streets and route it to arterials. Local roadways are used to travel within neighborhoods and are designed to discourage through-traffic in residential areas. The City sets traffic volume goals to limit traffic volumes to acceptable levels on these roadways, as they often have the capacity to carry far more traffic than is tolerable to people living along them.

GUIDING POLICY

- 5.4-G-1 Design and reconfigure collector and local roadways to improve circulation and to connect residential and commercial areas of the City.

IMPLEMENTING POLICIES

- 5.4-I-1 Implement residential traffic calming measures, as warranted, and police enforcement to mitigate speeding and other traffic impacts in residential areas of the City.
- 5.4-I-2 Implement traffic-control measures and design features that support attainment of the City's goal of less than 3,000 vehicles per day on collector roadways.

The City's goal is to limit traffic volumes on collector roadways to less than 3,000 vehicles per day. Due to the dual function that collectors serve, both property access and mobility, the goal may not be achievable in some cases. The City seeks to balance the needs for preservation of residential character and for adequate mobility, for each collector roadway.

- 5.4-I-3 Implement traffic-control measures, residential traffic calming, and design features that support attainment of the City's goal of less than 500 vehicles per day on local roadways.

The City's goal is to limit traffic volumes on local roadways to less than 500 vehicles per day. Because many local streets connect to several other streets serving a variety of uses, the goal may not be achievable in some cases. The City seeks to minimize the impact of higher volumes on local streets, and minimize inappropriate travel on these streets, through implementation of the Residential Traffic Calming program and appropriate roadway design features in new development areas.

- 5.4-I-4 Construct improvements to collector roadways as follows:
- **Deerwood Road:** Widen to four lanes from San Ramon Valley Boulevard to Crow Canyon Road.
 - **Camino Ramon:** Widen to four lanes from Crow Canyon Road to Fostoria Parkway.
 - **Shoreline Drive:** Designate as a collector street and construct as a four-lane roadway from Crow Canyon Road to Lilac Ridge Road.

- **Twin Creeks Drive:** Extend and construct as a four-lane street from Crow Canyon Road to Old Crow Canyon Road.
- **Westside Drive:** Complete as a two-lane collector street.

- 5.4-I-5 Mitigate appropriately traffic that impacts collector streets as a result of new residential development.

- 5.4-I-6 Implement controlled or permit-only parking restrictions in residential areas adjacent to California High School. This policy is prohibited in its application to additional residential areas or areas adjacent to public parks within the City of San Ramon.

5.5 TRANSPORTATION SYSTEMS MANAGEMENT AND TRANSIT

The term "Transportation Systems Management" (TSM) refers to measures designed to reduce automobile traffic in order to improve air quality and reduce traffic congestion. These measures include public transit, telecommuting, compressed work weeks, carpooling, vanpooling, walking, bicycling, and incentives to increase the use of these alternatives. TSM has become increasingly important in maintaining acceptable levels of service in the Tri-Valley and elsewhere in the Bay Area.

San Ramon recognizes the need to reduce the use of single-occupant vehicles to achieve improved levels of service and regional air quality. Since 1989, the City's data has shown that it maintains the lowest drive alone rate of all Contra Costa County jurisdictions and has a high number of vanpools with

a San Ramon destination. The City's TSM Program provides a unique opportunity for the public and private sectors to work together toward the common goal of reducing traffic congestion.

TRANSIT

Bus service in San Ramon is currently provided by the Central Contra Costa Transit Authority (CCCTA). The City has an intermodal transit facility located within the Bishop Ranch Business Park, which provides bus service for commuters within San Ramon, as well as connecting service to and from adjoining cities in the Tri-Valley.

While the City has worked closely with CCCTA to fill the need for public transit, regional as well as local transit appears necessary to maintain acceptable levels of service. Projections indicate the potential for serious traffic congestion in the I-680 corridor in the future. These projections are based on anticipated growth in the communities along the I-680 corridor, and in neighboring regions such as Silicon Valley. Regional public transit serving the I-680 corridor will be necessary to preclude further widening of the freeway.

GUIDING POLICY

5.5-G-1 Utilize Transportation Demand Management (TDM) as an integral component of the City's transportation program to reduce total vehicle trips on San Ramon streets and to contribute to regional air quality improvements.

IMPLEMENTING POLICIES

5.5-I-1 Cooperate with public agencies and other jurisdictions to promote local and regional public transit service in San Ramon.

5.5-I-2 Encourage and assist major employers and commercial complexes to reduce the number of single-occupant vehicles by participating in the City's Transportation Systems Management programs.

5.5-I-3 Support local bus service to and from regional transit lines. Bus service or other public transportation service should be included under the Initial Level of Development as part of the Dougherty Valley area. The City shall work to improve the transit service to and from San Ramon.

5.5-I-4 Preserve options for future transit use when designing improvements for roadways.

5.5-I-5 Support future transit uses in the I-680 right-of-way.

5.5-I-6 Work with other jurisdictions and agencies to coordinate the City's TSM programs with regional plans that are aimed at reducing traffic congestion and improving air quality.

5.5-I-7 Encourage new development to include a mix of uses that will allow people to walk between destinations.

5.5-I-8 Support alternative public transportation programs and obtain funding for new TSM projects.

- 5.5-I-9 Encourage employers and commercial complexes to emphasize public transit services or private alternatives to the single-occupant vehicle.
- 5.5-I-10 Work with regional transit providers to situate transit stops and hubs at locations that are convenient for transit users, and promote increased transit ridership through the provision of shelters, benches, and other amenities.
- 5.5-I-11 Coordinate with Caltrans and transit providers to identify and implement park and ride sites with convenient access to public transit.
- 5.5-I-12 Work with the San Ramon Valley Unified School District, Parent-Teacher Associations, and transit providers to address and implement a public school transportation system.
- 5.5-I-13 Consider the construction of public parking facilities in the downtown or City Center areas to serve projected parking demand, while carefully balancing the need for adequate parking against the desire to minimize traffic growth.

5.6 BICYCLE AND PEDESTRIAN ROUTES

Bicycling and walking are key elements of San Ramon's circulation system. The City has an extensive network of bikeways, sidewalks, and trails that enhance neighborhood accessibility and help to reduce reliance on the private automobile.

Figure 5-2 identifies the location of the City's existing and planned bicycle routes, and Table 5.6 categorizes these routes by "class". Bicycle routes are grouped into three different categories, all of which have standards for width, signs, and pavement marking. A "Class I" bikeway, also referred to as a bike path, is a right-of-way that is completely separated from any street. A "Class II" bikeway, or bike lane, is a one-way, striped, and signed lane on a street. A "Class III" bike route shares the road with pedestrians and motor vehicle traffic and is marked only by signs. With the exception of the Iron Horse Trail, Class I bike paths from Bent Creek to Old Ranch Park, and a "Cross-Valley" trail in the PG&E right-of-way, all bikeways in San Ramon are Class II or III, located on City rights-of-way. It is the City's goal to provide and maintain a safe and comprehensive bicycle and pedestrian system that connects all parts of the City.

GUIDING POLICY

- 5.6-G-1 Encourage bicycling and walking as alternatives to the automobile.

IMPLEMENTING POLICIES

- 5.6-I-1 Establish a network of on- and off-roadway bicycle routes to encourage their use for commute, recreational, and other trips. Improve and expand bicycle routes for commuters in San Ramon. The design of bike routes shall consider the safety of cyclists.
- 5.6-I-2 Develop bicycle routes that provide access to schools and parks.

- 5.6-I-3 Emphasize the Iron Horse Trail as a major north-south route for non-motorized transportation.

The Iron Horse Trail is an ideal corridor for a bicycle path because it is flat and continuous through the entire San Ramon Valley, and it links residential areas with Bishop Ranch Business Park. With a proposed path and landscaping for walkers, joggers, equestrians, and bicyclists, this Southern Pacific Railroad right-of-way is one of San Ramon's primary public assets. The East Bay Regional Park District proposes a Class I bike route along the entire rail corridor from the Alameda/Santa Clara County line north to Martinez. Any proposal for uses other than non-motorized forms of travel will require mitigation and public participation.

- 5.6-I-4 Require bicycle parking, storage and other support facilities as part of any new office and retail developments and public facilities.

Studies have indicated the importance of providing well-located, secure bike storage facilities at employment sites, shopping and recreational areas, and schools in order to facilitate bike use. The City shall seek assistance from major employers to provide similar facilities for their employees.

- 5.6-I-5 Develop a series of continuous walkways within Bishop Ranch Business Park, commercial districts, and residential neighborhoods so they connect to one another.

Sidewalks should be creatively designed to invite safe and pleasant use by pedestrians and should be free of

obstacles such as signs. Sidewalks should be protected or separated from traffic.

- 5.6-I-6 Continue to carry out requirements to make public rights-of-way accessible to physically disabled persons.

- 5.6-I-7 Adopt a Bicycle Master Plan that considers sources of statewide funding for bicycle programming.

- 5.6-I-8 Encourage alternate fuel sources, such as charging stations, as part of new large development projects to reduce the use of traditional fossil fuel burning vehicles.

- 5.6-I-9 Study the feasibility of bicycle/pedestrian overcrossings on the Iron Horse Trail at Bollinger Canyon Road and Crow Canyon Road.

- 5.6-I-10 Ensure that roadway improvement projects do not decrease mobility or accessibility for bicyclists or pedestrians.

Table 5.6-1: Bicycle Routes by Classification

	<i>Existing</i>	<i>Proposed</i>
Alcosta Boulevard (between Crow Canyon Road and Veracruz Drive)	Class II	
Alcosta Boulevard (between Veracruz Drive and San Ramon Valley Boulevard)	Class III	
Bishop Drive (between Norris Canyon Road and Sunset Drive)	Class II	
Bollinger Canyon Road (between Norris Canyon Road and Crow Canyon Road)	Class III	
Bollinger Canyon Road (between San Ramon Valley Boulevard and Norris Canyon Road)	Class II	
Bollinger Canyon Road (between Crow Canyon Road and Deerwood Drive)	Class II	
Bollinger Canyon Road (north of Deerwood Drive)		Class II
Bollinger Canyon Road (between Alcosta Boulevard and San Ramon Valley Boulevard)	Class III	
Broadmoor Drive (between Montevideo Drive and Alcosta Boulevard)	Class III	
Cross Valley Trail (between Tareyton Avenue and Alcosta Boulevard)		Class I
Crow Canyon Road (east of Alcosta Boulevard)	Class II	
Davona Drive	Class III	
Deerwood Road (between San Ramon Valley Boulevard and Deerwood Drive)	Class II	
Deerwood Drive		Class III
Dougherty Road		Class II
Fostoria Parkway (San Ramon Valley Boulevard to Crow Canyon Place)	Class II	
Fostoria Parkway (Crow Canyon Place to Iron Horse Trail)		Class III
Kimball Avenue	Class III	
Montevideo Drive	Class III	
Norris Canyon Road (east of San Ramon Valley Boulevard)	Class II	
Norris Canyon Road (between San Ramon Valley Boulevard and Bollinger Canyon Road)	Class III	
Norris Canyon Road (between Bollinger Canyon Road and western City limits)	Class II	
Pine Valley Road	Class III	
Pine Valley Road (between San Ramon Valley Boulevard and Westside Drive)	Class II	
San Ramon Valley Boulevard	Class II	
Stagecoach Road	Class II	
Sunset Drive	Class III	
Village Parkway	Class II	
Westside Drive	Class II	